

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 38-40 have been added, and claim 15 has been amended without narrowing the scope of the claims as would have been understood by one of ordinary skilled in the art, and not for reasons of patentability.

No new matter is being presented, and approval and entry of the foregoing amendments and new claims are respectfully requested.

Claims 1-40 are pending and under consideration. Reconsideration is requested.

OBJECTIONS TO THE CLAIMS:

In the Office Action at page 2, the Examiner objects to claim 14 for an informality by reciting "later" instead of "layer." As a point of clarification, claim 14 does not recite such a feature which is instead recited in claim 15. Claim 15 has been amended to correct the typographical error noted in the Office Action. Reconsideration and withdrawal of the outstanding claim objection is respectfully requested.

REJECTION UNDER 35 U.S.C. §102:

A. Rejection of claims 1-3, 7-9 and 18 in view of Pichler et al.

In the Office Action at pages 3-5, the Examiner rejects claims 1-3, 7-9 and 18 under 35 U.S.C. §102 in view of Pichler et al. (U.S. Patent No. 6,402,579). This rejection is respectfully traversed and reconsideration is requested.

By way of review, claim 1 recites, among other features, "an upper electrode ... comprising a conductive material." The upper electrode includes "at least a first thin film having a first grain density of the conductive material" and includes "a second thin film having a second grain density of the conductive material other than the first grain density."

In contrast, Pichler et al. teaches a double layer cathode having a thin layer of a low work function element and a thick layer of a stable conductive layer. By way of example, in FIG. 5, the cathode has a first layer 50 of Ca capped with a second layer 60 of Al. Further examples of low work function elements are given as Li, Ba, Ca, Ce, Cs, Eu, Rb, K, Sm, Na, Sr, Tb, and Yb, whereas the examples of the stable material are Al, Zr, Mg, Si, Sb, Sn, Zn, Mn, Ti, Cu, Co, W, Pb, In, Ag, and alloys such as Al-Cu, and Al-Si. (Col. 3, lines 55-61, col. 4, lines 41-55, col. 10, lines 4-9). As such, Pichler et al. does not suggest that the thin and thick layers are of a same material and instead suggests using different materials. Therefore, it is respectfully submitted

that Pichler et al. does not disclose or suggest "at least a first thin film having a first grain density of the conductive material" and includes "a second thin film having a second grain density of the conductive material" as recited in claim 1.

For at least similar reasons, it is respectfully submitted that Pichler et al. does not disclose or suggest the invention as recited in claims 7 and 18.

Claims 2, 3, 8, and 9 are deemed patentable due at least to their depending from corresponding claims 1 and 7.

B. Rejection of claims 1-4, 6-10, 14 and 18 in view of Suzuki et al.

In the Office Action at pages 5-8, the Examiner rejects claims 1-4, 6-10, 14 and 18 under 35 U.S.C. §102(e) in view of Suzuki et al. (U.S. Patent Publication No. 2005/0003231). This rejection is respectfully traversed and reconsideration is requested.

As an initial point of clarification, the instant application was filed in the United States Patent and Trademark Office on March 11, 2004. In contrast, Suzuki et al. entered the national stage in the United States on May 18, 2004, which is after the US filing date of the instant application, based upon Patent Cooperation Treaty (PCT) application PCT/JP02/12152. Moreover, PCT application PCT/JP02/12152 was published as WO 03/045115, which was not in English and was published after the May 28, 2003 foreign priority date of the instant application.

Under 35 U.S.C. §102(e)(1), in order to use the international filing date of a PCT application for the purposes of 35 U.S.C. §102(e), the international application needs to have designated the United States and have been "published under Article 21(2)(a) of such treaty in the English language." See MPEP 2136.03(II), EXAMINATION GUIDELINES FOR 35 U.S.C. § 102(E), AS AMENDED BY THE AMERICAN INVENTORS PROTECTION ACT OF 1999, AND FURTHER AMENDED BY THE INTELLECTUAL PROPERTY AND HIGH TECHNOLOGY TECHNICAL AMENDMENTS ACT OF 2002, AND 35 U.S.C. § 102(G) (December 11, 2002). Since Suzuki et al. is a National Stage of a PCT application that was not published in English, it is respectfully submitted that Suzuki et al. does not have a reference date under 35 U.S.C. §102(e) as applied against the instant application. Since Suzuki et al. does not appear to otherwise qualify as prior art, it is respectfully requested that the Examiner withdraw the rejection of claims 1-4, 6-10, 14 and 18 in view of Suzuki et al.

REJECTION UNDER 35 U.S.C. §103:

A. Rejection of claims 1-3, 7-9 and 18 in view of Pichler et al. and the Examiner's Assertions

In the Office Action at pages 3-5, the Examiner rejected claims 1-3, 7-9 and 18 under

35 U.S.C. §103 in view of Pichler et al. and the Examiner's assertions set forth on pages 3-4. This rejection is respectfully traversed and reconsideration is requested.

Even assuming arguendo the Examiner's assertions are correct and that a motivation exists as suggested by the Examiner, the Examiner's assertions do not cure the above noted deficiency of Pichler et al. as applied to claim 1. As such, it is respectfully submitted that the combination does not disclose the invention as recited in claim 1.

For at least similar reasons, it is respectfully submitted that the combination does not disclose the invention recited in claim 7, or the invention recited in claim 18.

Claims 2, 3, 8, and 9 are deemed patentable due at least to their depending from corresponding claims 1 and 7

B. Rejection of claims 1-4, 6-10, 14 and 18 in view of Suzuki et al.

In the Office Action at pages 5-8, the Examiner rejects claims 1-4, 6-10, 14 and 18 under 35 U.S.C. §103 in view of Suzuki et al. and Sekiya et al. (U.S. Patent Publication No. 2002/0027414) and/or Hanakawa et al. (U.S. Patent Publication No. 2002/0008815). This rejection is respectfully traversed and reconsideration is requested.

Since Suzuki et al. does not appear to be prior art as set forth above, and since Sekiya et al. and/or Hanakawa et al. are not relied upon as disclosing the features of the claimed invention without Suzuki et al., it is respectfully requested that the Examiner reconsider and withdraw the rejection of the claims in view of Suzuki et al., Sekiya et al. and/or Hanakawa et al.

STATUS OF CLAIMS NOT REJECTED:

On page 9 of the Office Action, the Examiner allows claims 15-17 and 23-37, and objects to claims 5, 11-13, and 19-22 for depending from rejected claims.

PATENTABILITY OF NEW CLAIMS:

Claim 38 is deemed patentable for at least reasons similar to why claim 18 is deemed patentable. Claims 39 and 40 are deemed patentable due at least to their depending from corresponding claims 38 and 1.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being

in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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